**FLOODPLAIN Factor Sheet**

06-12-2019 Wisconsin Department of Transportation

|  |  |  |
| --- | --- | --- |
| **Alternative:** | **Preferred: [ ]  Yes [ ]  No [ ]  None identified** | **Project ID:** |

When completed this Factor Sheet along with the Environmental Document acts as the Location Study consistent with 23 CFR 650.111.

1. Name the floodplain watershed (and floodplain zoning authority), where your project is located and encroaching. Encroaching includes modification or repair of existing transportation facilities already in a floodplain. Confirm if the community participates in the Federal Emergency Management Administration (FEMA) voluntary National Flood Insurance Program (NFIP):

 

1. Floodplain:

 B. Watershed:       Size:       (square miles)

1. Municipality:
2. NFIP Applicability: [ ]  Yes [ ]  No, status date:
3. Attach map illustrating watershed, floodplain, and project limits. Map location:

2. Indicate watershed characteristics:

 [ ]  Rural Watershed

 [ ]  Rapidly Urbanizing Watershed - NR 116.03 (40)

 [ ]  Urban Watershed

 [ ]  Priority watershed – NR 120.02 (30)

Provide additional description of the upstream and downstream flow characteristics and potential floodwater receptors based on the context and intensity of the alternative within the watershed:

3. Indicate key regulatory zones the alternative encroaches upon, per Wisconsin Department of Natural Resources (DNR) Floodplain Management definitions and confirm mapping status for your location in E below:

 A. [ ]  Floodplain

1. [ ]  Floodway
2. [ ]  Flood Fringe
3. [ ]  Flood Storage
4. [ ]  Confirmed DNR approved mapping status on this date:
5. [ ]  Mapped Floodplain
6. [ ]  Unmapped Floodplain

4. Indicate zones your alternative encroaches upon, per Floodplain Zoning Authority Zoning Map:

 [ ]  Municipal Floodplain Zoning Map approved, map date:       or not applicable [ ] .

 Map location:

1. [ ]  Floodway district
2. [ ]  Flood fringe district
3. [ ]  Regional flood elevation
4. [ ]  Shallow depth flooding district
5. [ ]  Flood storage district
6. [ ]  Coastal floodplain district
7. [ ]  Floodplain Island

5. Indicate floodplain zone(s) your alternative encroaches per FEMA NFIP Flood Insurance Rate Map (FIRM) risk identification map legend definitions.

[ ]  Special Flood Hazard Areas (SFHAs) in Zone:

[ ]  Floodway Areas in Zone AE

[ ]  The project footprint is outside the SFHA and Floodway Areas in Zone AE

A copy of the FIRM Map with overlay of project encroachment must be included. Map location:

**6. Briefly describe encroachment** **and proposed work in, over, or adjacent to floodplain and complete questions below**:

 A. Indicate type of encroachment:

 [ ]  Structure, describe type:

 [ ]  Drainage improvement, pipe culvert replacement or extension

  [ ]  Roadway/embankment fill

 [ ]  Temporary causeway expected

 [ ]  Other (explain):

B. Indicate type/s of encroachment alignment, length and scale of overall footprint on floodplain for the alternative:

  [ ]  Transverse – length       [ ]  ft. [ ]  miles

 [ ]  Longitudinal - length       [ ]  ft. [ ]  miles

 [ ]  Combined transverse and longitudinal encroachment will occur

 [ ]  Encroachment footprint:       acres

C. Will this be a new footprint encroachment or a modification to existing infrastructure resulting in encroachment or possibly a reduction in historical transportation facility footprints on the floodplain?

 [ ]  New footprint

 [ ]  Modification to existing footprint

 [ ]  No change in footprint

 [ ]  Reduction in footprint

7. What are your anticipated floodplain backwater conditions from this alternative based on the DOT approved computed Hydrology and Hydraulic Analysis methodology? Reference results to DNR Floodplain Management NR 116 criteria:

 [ ]  Increase in regional flood height (a calculated rise equal to or > 0.01 ft)

 [ ]  No change in regional flood height

 [ ]  Decrease in regional flood height

 Indicate methodology used and date of analysis:

8. Indicate effects of backwater change and encroachment actions on the physical, chemical and biological integrity of the floodplain ecosystem services.

1. [ ]  Physical integrity (floodway flow and flood risk to property loss and hazard to life)

 [ ]  benefit

 [ ]  no effect

 [ ]  adverse effect

 Describe:

1. [ ]  Chemical integrity (surface water and groundwater quality)

 [ ]  benefit

 [ ]  no effect

 [ ]  adverse effect

 Describe:

1. [ ]  Biological integrity (human environment and ecological functions and services)

 [ ]  benefit

 [ ]  no effect

 [ ]  adverse effect

 Describe:

9. What avoidance, minimization or compensation measures will be considered:

10. Are there beneficial opportunities to develop new floodplain storage or reestablish old floodplain storage to offset or mitigate impact as part of infrastructure development? Are there other feasible ecological restoration or enhancement opportunities such as wetland restoration, stream restoration, aquatic organism passage (AOP), wildlife crossings or other:

 [ ]  yes, describe:

 [ ]  no, describe:

11. Describe and provide the results of coordination with any regulatory agency or floodplain zoning authority, and describe any public comments related to the encroachment action:

12. Is the alternative compatible with Federal, State or Local floodplain land use plans and expectations?

 [ ]  yes

 [ ]  no

 Describe:

13. If this project is an FHWA action, indicate if the alternative would cause any of the following SIGNIFICANT ENCROACHMENTS per FHWA Regulations (23 CFR Subpart A 650.105(q)):(If the project is not a FHWA action skip to question 14.)

[ ]  Significant potential for interruption or termination of a transportation facility which is needed for emergency vehicles or a community's only evacuation route. Describe:

[ ]  Significant risk. Risk means the consequences associated with the probability of flooding attributable to an encroachment. It includes the potential for property loss and hazard to life during the service life of highway. Describe:

[ ]  Significant adverse impact on natural and beneficial floodplain values such as fish, wildlife, plants, open space, natural beauty, scientific study, outdoor recreation, agriculture, aquaculture, forestry, natural moderation of floods, water quality maintenance, and groundwater recharge. Describe:

If any of the boxes above are checked, a significant encroachment on a floodplain will occur, requiring FHWA to prepare an Only Practicable Alternative Finding (Finding). FHWA signature on the final environmental document indicates adoption of the Finding described below:

 [ ]  No significant encroachment, explain:

**14. Indicate the timing of possible State or Federal Agency permits, approval and coordination for the floodplain encroachment and list the Agencies. In addition to DNR and FHWA, other possible Agency approvals may include: US Army Corp of Engineers (USACE), FEMA, United States Coast Guard (USCG), United States Environmental Protection Agency (EPA) and United States Fish and Wildlife Service (USFWS):**

 [ ]  Prior to completion of environmental document:

 [ ]  Post environmental document approval and included as an environmental commitment:

 [ ]  Prior to Construction Let:

 [ ]  Prior to Construction:

15. Impacts from all proposed construction affecting hydraulic characteristics of mapped floodplains have been evaluated. Implementation procedures for data sharing, landowner notifications and legal arrangements for addressing concerns associated with waterway crossings and other floodplain encroachment as identified by NR 116 (Wisconsin’s Floodplain Management Program) and NR 320 (Bridges and Culverts In or Over Navigable Waterways) have been or will be addressed prior to construction pursuant to the DOT/DNR February 11, 1988 Cooperative Agreement Implementation Memo of the DOT/DNR Cooperative Agreement, Section VII – Waterway Crossings and Other Floodplain Encroachments (March 1987):

[ ]  Yes, procedure for mapped areas is complete

[ ]  Yes, procedure for unmapped areas is complete

[ ]  No, procedure for mapped areas is pending final design (add to environmental commitments), discuss:

[ ]  No, procedure for unmapped areas are pending final design (add to environmental commitments), discuss: